

[FREQUENCY CHARACTERIZATION OF QUARTZ CRYSTALS]

Abstract

Techniques for determining a frequency profile of a quartz crystal in real time. Quartz crystals are subjected to a series of temperature cycles at various temperature rates and the crystal frequencies, crystal temperature parameters, and the temperature rates are monitored as the crystal is subjected to the temperature cycles. The monitored frequencies are grouped correlated with the monitored temperature parameters and temperature rates. A system for determining the frequency of a quartz crystal includes a processor adapted to perform the frequency profiling techniques.